

## **REMARKS**

Claims 43-89 are now pending in the application. Claims 1-42 are cancelled. Claims 43-89 are added. Support for the additions can be found throughout the originally filed specification, and especially at Figures 1, 2, and 7 and related discussion. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

## **STATEMENT OF THE SUBSTANCE OF THE INTERVIEW**

Applicants thank the Examiner for the telephonic interview with Applicants' representatives on December 8, 2006. Therein, new claims were discussed, particularly with reference to Figure 2. Agreement was not reached.

## **SPECIFICATION**

The specification stands objected to for certain informalities. These objections are respectfully traversed.

Applicants respectfully submit that these objections are rendered moot by cancellation of claims 1-42 herein.

Therefore, reconsideration and withdrawal of these objections is respectfully requested.

## **REJECTION UNDER 35 U.S.C. § 101**

Claims 1-42 stand rejected under 35 U.S.C. § 101 for non-statutory subject matter. This rejection is respectfully traversed.

Applicants respectfully submit that these rejections are rendered moot by cancellation of claims 1-42 herein. Moreover, with regard to rejection under 35 U.S.C. § 101, Applicant has reviewed the interim guidelines for examination. The proposed claim

recites an architecture for a chip which includes different electric circuits having multipliers and capacitors as well as a digital memory. This recited subject matter clearly falls within the category of a machine and outside the enumerated judicial exceptions.

Accordingly, Applicants respectfully request the Examiner reconsider and withdraw the rejection of the claims under 35 U.S.C. § 101.

#### **REJECTION UNDER 35 U.S.C. § 102**

Claims 1-4, 8-14, 17-19, 23, 25, 26, 28-34, 36, 38, 39, 41, and 42 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Winder (U.S. Pat. No. 6,213,958). This rejection is respectfully traversed.

Applicants respectfully submit that this rejection is rendered moot by cancellation of claims 1-42 herein.

Accordingly, Applicants respectfully request the Examiner reconsider and withdraw the rejections of claims 1-4, 8-14, 17-19, 23, 25, 26, 28-34, 36, 38, 39, 41, and 42 under 35 U.S.C. § 102(e).

#### **REJECTION UNDER 35 U.S.C. § 103**

Claims 5, 6, 16, 22, and 35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Winder (U.S. Pat. No. 6,213,958) in view of Salam (U.S. Pat. No. 5,689,621). This rejection is respectfully traversed.

Applicants respectfully submit that this rejection is rendered moot by cancellation of claims 1-42 herein.

Accordingly, Applicants respectfully request the Examiner reconsider and withdraw the rejection of claims 5, 6, 16, 22, and 35 under 35 U.S.C. § 103(a).

Claims 7, 15, 20, 21, 24, and 37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Winder (U.S. Pat. No. 6,213,958) in view of Thaler (U.S. Pat. No. 6,014,653). This rejection is respectfully traversed.

Applicants respectfully submit that this rejection is rendered moot by cancellation of claims 1-42 herein.

Accordingly, Applicants respectfully request the Examiner reconsider and withdraw the rejection of claims 7, 15, 20, 21, 24, and 37 under 35 U.S.C. § 103(a).

Claim 27 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Winder (U.S. Pat. No. 6,213,958) in view of Greenberger (U.S. Pat. No. 6,675,187). This rejection is respectfully traversed.

Applicants respectfully submit that this rejection is rendered moot by cancellation of claims 1-42 herein.

Accordingly, Applicants respectfully request the Examiner reconsider and withdraw the rejection of claims 27 under 35 U.S.C. § 103(a).

Claim 40 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Winder (U.S. Pat. No. 6,213,958) in view of Thaler (U.S. Pat. No. 6,014,653) and Salam (U.S. Pat. No. 5,689,621). This rejection is respectfully traversed.

Applicants respectfully submit that this rejection is rendered moot by cancellation of claims 1-42 herein.

Accordingly, Applicants respectfully request the Examiner reconsider and withdraw the rejections of claim 40 under 35 U.S.C. § 103(a).

### **NEW CLAIMS 43-90**

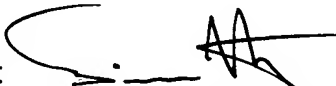
New independent claim 43, recites, "A self-programming, mixed-mode chip for estimation, prediction and control, comprising: an array of synaptic cells which are interconnected to form a feedforward neural network, wherein each synaptic cell includes: a learning electrical circuit operable to update a local weight according to an update rule and store the local weight in a capacitor; a digital memory operable to store the local weight in a digital form; and a processing electrical circuit comprised of a one-dimensional multiplier which is operable to process a component of an analog input signal in accordance with the local weight stored in the digital memory." Of note, Applicant's claimed architecture stores weights for each cell locally in a capacitor and locally in a digital memory. New independent claims 62 and 81 recite similar subject matter. The prior art references cited by the Examiner do not teach, suggest, or motivate the claimed subject matter, including this noted feature. These differences are significant. Therefore, new claims 43-90 should be in condition for allowance.

## CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: DEC. 21, 2006

By:   
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